Guidelines for Reporting VOC Emissions from Component Leaks December 2013

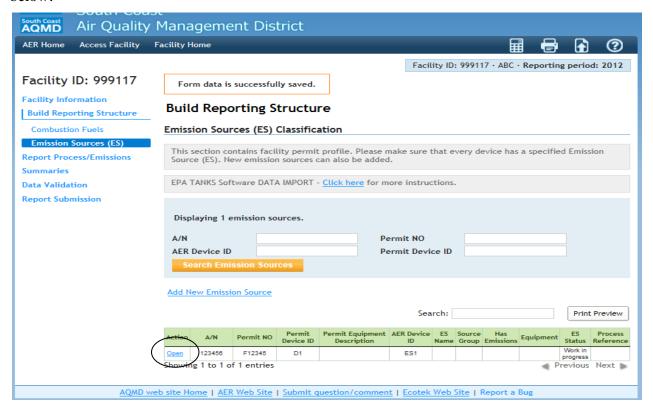
The South Coast Air Quality Management District (District) Rule 301 (e) requires facilities operation under District permit to annually report their emissions from all equipment (permitted and non-permitted) to the District. The following types of fugitive emissions should be reported as part of the District's Annual Emissions Reporting (AER) Program:

- Permitted Annual Fugitive Emissions Oil/Gas Production and Chemical Plants
- Non-permitted Annual Fugitive Emissions—Oil/Gas Production and Chemical Plants
- Permitted Annual Refinery Fugitive Emissions
- Permitted Annual Fugitive Emissions Terminals/Depots

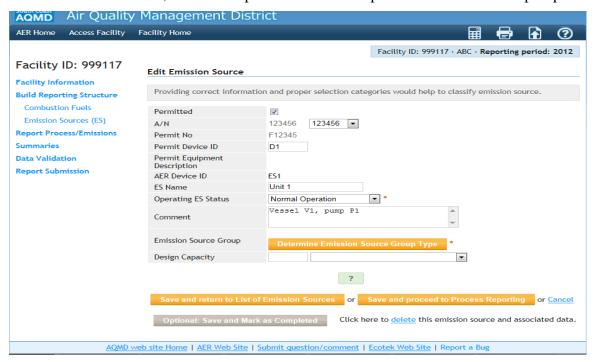
In order to estimate fugitive emissions (component leaks) from the petroleum industry (i. e., oil and gas production facilities, refineries, marketing terminals) and chemical plants, as well as guidelines for component counting and leak quantification, please refer to AQMD's "Guidelines for Fugitive Emissions Calculations", dated June 2003. A copy of the document may be obtained from the District or can be downloaded at www.aqmd.gov/aer/aer.html.

SPECIFIC INSTRUCTIONS

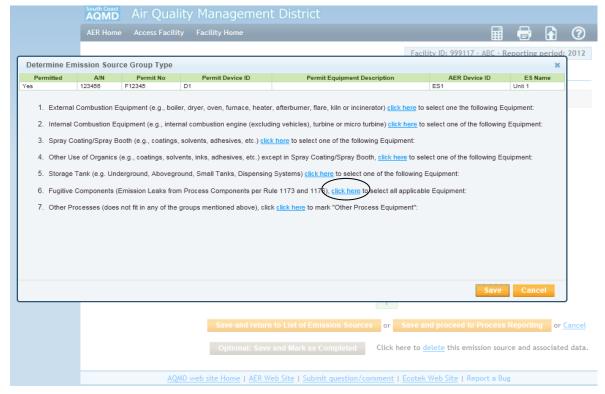
Following are instructions on how to report fugitive emissions using the new AER format. For example purposes, facility ABC with the ID# 999117 has permitted equipment with fugitive emissions, covered by application A/N# 123456, Permit to Operate F12345, permit device D1, AER device ES1, as shown below:



Click the "Open" link under the "Action" column and the following screen appears. Fill out the mandatory fields marked by an asterisk and optionally, fill out the other fields. For facility ABC, A/N 123456 describes Unit 1, in normal operation and is comprised of vessel V1 and pump P1:

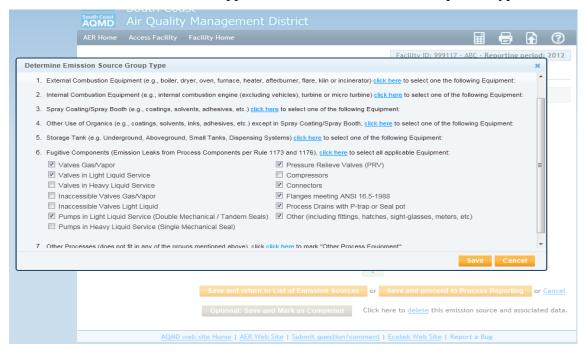


When clicking on the "Determine Emission Source Group Type" button, the following selection window appears:

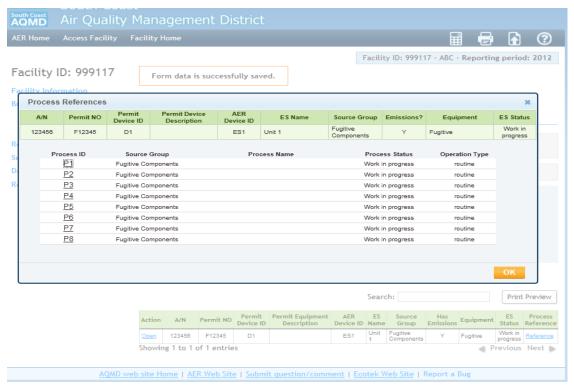


Go to option #6: Fugitive Components and click on the link provided. Let's assume that the fugitive components for this emission source are: 5 valves in gas/vapor service, 4 valves in light liquid service, 2 PRV's, 1 pump in light liquid service, 20 connectors, 1 sight-glass, 6 flanges, and 1 drain.

On the next screen, check all the applicable boxes for the above component types:



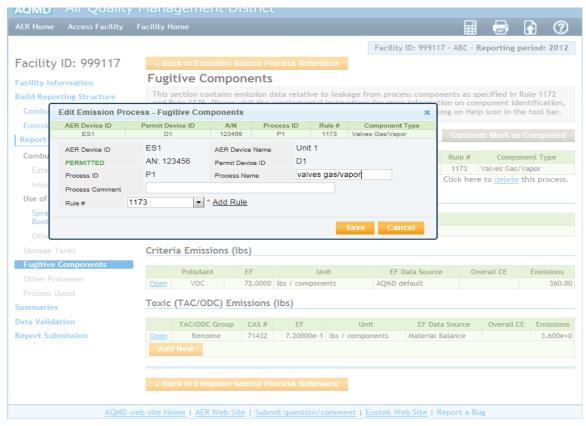
Click the "Save" button and proceed to Process Reporting. (If you are not ready to input the data at this time, click the "Save and return to List of Emission Sources" button to work on another emission source.) The following window displays 8 processes corresponded to the component types:



To report emissions, click on the "P1" link. Note that the following window shows the component type as Valves Gas/Vapor:



Under "Process", click the "Open" link and select Rule 1173 in the mandatory field marked with an asterisk and optionally fill out other fields:



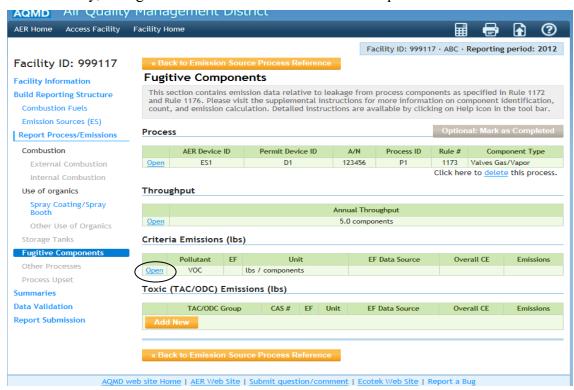
Data must be saved before moving on to next step. Clicking on the "Save" button will bring user back to data enter screen for process P1 as shown:



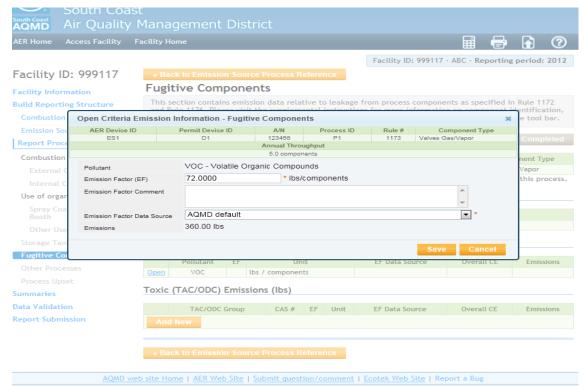
Next, go to "Throughput", click the "Open" link and fill out the "Number of components" field, and click "Save". As mentioned before, facility ABC Unit 1 has 5 valves in gas/vapor service.



Save the entry, then go to "Criteria emissions" and click "Open".

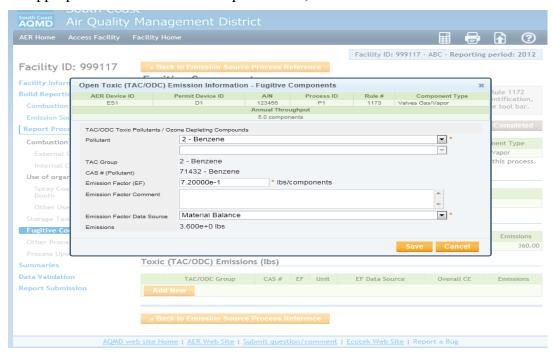


For the purpose of this exercise, since no screening data are available, the AQMD default emission factors (EF) will be used; for valves in gas/vapor service, EF is 72 lb/component/year. Note that emissions are calculated automatically. In the mandatory field "Emission Factor Data Source", select AQMD default; user can also comment on the emission factor in case other than default EF are used.



Click the "Save" button; if the VOC stream contains any toxic air compounds (TAC) or ozone depleting compounds (ODC), click on the "Add New" button under Toxic (TAC/ODC) Emissions. In the next window, select the TAC/ODC compound from the drop-down list.

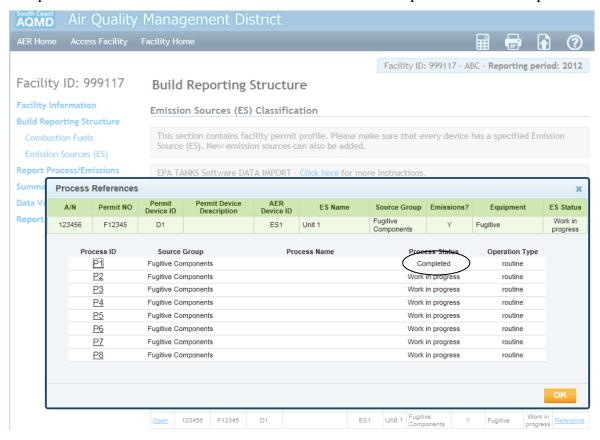
In this example, the gas/vapor stream is assumed to content 1% benzene by weight based on material balance. Therefore, the EF is 0.72 lbs/component. In the "Emission Factor Data Source" field, select the appropriate source from the drop-down list, then click the "Save" button.



Click on the "Save" button and the following screen appears:



If the data entered for process P1 is final, the user may want to click the grey button "Optional: Mark as Completed". Click "Back to Emission Source Reference" and proceed to the next process.



Using the same steps as for P1, fill out the information for P2 through P8 by clicking on the respective buttons, such that all components are accounted for. Once all processes are completed, click "OK" and proceed to reporting another emission source by clicking on the "Back to Emission Source Process Reference" button

For unpermitted emission sources that are not listed, user must add those sources and report emissions by clicking on the "Add New Emission Source" link:



The following screen will appear. Then, repeat the steps taken described before to report emissions for non-permitted equipment, the only difference being that the application and permit fields remain blank:

